REMARKS

Applicants thank the Examiner for the consideration shown the present application thus far. Claims 1 and 3-18 are pending and stand finally rejected.

Suspension of Prosecution Pending the Interference Between The Zyzak and Elder Applications

As discussed below, the present claims are subject to one rejection over an art reference, specifically, US Patent Application No. 2004/0058054, filed in the name of Elder, et al. The present application is related and commonly assigned to US Patent Application No. 10/606,137, filed in the name of Zyzak, et al. The Zyzak '137 application claims priority to an application filed on September 20, 2002 while the Elder application claims priority to September 19, 2002. Generally speaking, the subject matter of the present case, the Zyzak '137 application and the Elder application relates to the reduction of acrylamide in food products.

On August 22 of this year, a Suggestion of Interference was filed in the Zyzak '137 application over the Elder application. Moreover, the US PTO Private Pair suggests that the prosecution in the Elder application has been suspended, perhaps due to an interference with another application dealing with the reduction of acrylamide in food products.

Regardless, the present application is rejected over the Elder application and commonly owned with the Zyzak '137 application. It is respectfully requested that prosecution in the present application be suspended pending the outcome of the Suggestion of Interference between the Elder and Zyzak '137 application.

35 U.S.C. § 112 Rejection

Claims 5-13 and 17-18 have been rejected under 35 U.S.C. § 112, second paragraph for allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter regarded as the invention. Specifically, the Examiner indicates that the term "reduced," both independently and in conjunction with the term "conventionally processed," is not clearly defined in the present claims. Please see the Remarks made above regarding the Elder application. Applicants respectfully request

that the prosecution of the present claims be suspended pending the outcome of the Suggestion of Interference between the Zyzak '137 and Elder applications.

As aforementioned, the Examiner rejects Claims 5-13 and 17-18 for the use of the term "reduced" therein. Specifically, the Examiner states that "reduced" is a relative term which renders the claim indefinite because it is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Moreover, in regards to Applicants' amendments, in which language was added to the claims for further clarification, the Examiner states that "[o]ne skilled in the art would not be apprised of how much asparagine or acrylamide is contained in 'conventionally processed' cocoa beans" since this "varies not only from cocoa species to cocoa species, commercial brand to brand, but also even from one roast to another within the same batch of beans."

Applicants respectfully disagree with the Examiner's assertions. First, Applicants point out that the claims alone do not have to define the term "reduced". Rather, the specification can provide the proper basis for definition of any term used in the claim. Applicants assert that the specification does in fact provide the proper definition and understanding of the term "reduced" as it relates both to asparagine-reduction and acrylamide-reduction.[1]

In addition, common usage of a term can provide definition for claim terms. For example, the term "reduced", in common usage, is defined as "to lessen in extent, amount, number, degree or price." The American Heritage Dictionary, 2nd Ed., Houghton Mifflin Company, Boston (1991). Such definition bolsters Applicants' use of the term in their specification since Applicants teach the reduction of the amount of acrylamide in roasted cocoa beans in comparison to roasted cocoa beans not treated for such acrylamide reduction.

Whether one skilled in the art looks to the specification or to common usage, it would be apparent to one skilled in the art that the term "reduced," as used in the presently rejected claims, means that the level of asparagine/acrylamide is less in treated

[1] Applicants' Specification, page 3, second full paragraph: "Accordingly, acrylamide formation in roasted cocoa beans can be *reduced* by removing the asparagine or converting the asparagine in the cocoa beans to another substance before final roasting of the beans." [Emphasis added.]

cocoa beans. Thus, the term "reduced" means that the cocoa beans have been treated with an enzyme such that the level of asparagine/acrylamide is less than what it would be in untreated cocoa beans.

Moreover, Applicants respectfully disagree with the Examiner's statement that one skilled in the art would not be apprised of how much asparagine or acrylamide is present in conventionally processed beans due to the variety between beans and roasting conditions. In contrast to the Examiner's positions, Applicants respectfully assert that those skilled in the art would understand what it meant by the foregoing comparison. Indeed, one skilled in the art does not need to know how much asparagine or acrylamide is present in conventionally processed beans to understand that when such beans are treated in accordance with the present invention, the amount of asparagine or acrylamide in the beans is less than it would have been had the beans been left untreated. Therefore, it is respectfully asserted that the term "reduced" in the presently rejected claims does indeed provide a standard for ascertaining the meaning, such that one skilled in the art would be reasonably apprised of the scope of the claimed invention.

As such, Applicants respectfully request reconsideration and allowance of Claims 5-13 and 17-18 over the Examiner's 35 U.S.C. § 112, second paragraph, rejection.

35 U.S.C. § 103 Rejection

The Examiner has rejected Claims 1 and 3-18 under 35 U.S.C. § 103 as being unpatentable over Elder et al., Pub. No. 2004/0058054 (herein "Elder). Specifically, the Examiner reasserts the arguments of the previous Office Action, which generally state that Elder teaches the reduction of acrylamide in cocoa. Please see the Remarks made above regarding the Elder application. Applicants respectfully request that the prosecution of the present claims be suspended pending the outcome of the Suggestion of Interference between the Zyzak '137 and Elder applications.

The Examiner bears the burden of factually supporting any prima facie conclusion of obviousness. In determining the differences between the cited art and the claims, the question is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious. See Stratoflex, Inc. v.

Aeroquip Corp., 713 F.2d 1530 (Fe. Cir. 1983). Distilling the invention down to the "gist" or "thrust" of an invention disregards the requirement of analyzing the subject matter "as a whole." See W.L. Gore & Assoc., Inc. v. Garlock, Inc., 721 F.2d 1540 (Fed. Cir. 1983). Inventors of unobvious compositions, such as those of the present invention, enjoy a *presumption* of non-obviousness, which must then be overcome by the Examiner establishing a case of prima facie obviousness by the appropriate standard. If the Examiner does not prove a prima facie case of unpatentability, then without more, the Applicant is entitled to grant of the patent. *See* In re Oetiker, 977 F.2d 1443.

To establish a prima facie case of obviousness under 35 U.S.C. §103, the Examiner must meet three basic criteria. First, there must be some suggestion or motivation, either in the reference itself, or in the knowledge generally available to one of ordinary skill in the art, to modify the reference. Second, there must be a reasonable expectation of success. Finally, the cited reference must teach or suggest *all* the claim limitations. See, for example, In re Vaeck, 947 F.2d 488 (Fed. Cir. 1991). Appellants again respectfully assert that the Office Action fails to establish any of these criteria, and thus, fails to make a prima facie case of obviousness under 35 U.S.C. § 103.

First, there is no suggestion or motivation to modify the reference. Elder very generally discusses the reduction of acrylamide by using the term "inactivating asparagine." However, this broad claim, without more, does not provide the motivation necessary to make obvious the specific methods and compositions disclosed presently for actually reducing acrylamide in cocoa and cocoa beans. While Elder's disclosure includes cocoa and cocoa beans among a long list of examples of foods which contain acrylamide, at no time does Elder specifically teach how to reduce acrylamide in cocoa or cocoa beans. Indeed, Elder does not even claim reduction of acrylamide in cocoa beans, choosing instead to focus on rice, wheat, corn, barley and other like carbohydrates.

In sharp contrast to the ambiguous teachings of Elder, the present invention is clearly defined and supported in the Specification, which not only provides a specific analytical method useful for reducing acrylamide in food products, but also provides numerous examples illustrating the use of that method to reduce acrylamide in cocoa products and cocoa beans. Thus, while Elder can show, by way of a single example, only that the level of acrylamide may be reduced in a laboratory setting, apart from any food product, and in particular, any cocoa product, the present Applicants have provided

specific instances of acrylamide reduction in cocoa and cocoa beans. Thus, in contrast to the Examiner's assertion on page 4 of the October 6, 2005 Office Action that Elder does not need to be modified to teach the present invention, Applicants respectfully assert that without such modification, Elder fails to teach the present invention. Therefore, due to the lack of support for the theories presented therein, Applicants continue to respectfully assert that there is no suggestion or motivation to modify Elder such that the present invention is obvious in view thereof. For this reason alone, Applicants respectfully assert that a prima facie case of obviousness has not been established.

Second, there is no reasonable expectation of success as Elder fails to teach a method for acrylamide reduction in cocoa beans. As aforementioned, Elder generally discusses "inactivating asparagine" in foods, yet fails to provide any practical teachings relating thereto, even though the claims are directed to food products. The Examiner relies on paragraph [0011] of Elder to allegedly teach the reduction of acrylamide by contacting asparagine with asparaginase to decompose the asparagine into aspartic acid ammonia. However, Applicants respectfully assert that the complex nature of food products, and in particular, cocoa and cocoa beans, does not permit Elder to speculate that such a reaction would necessarily occur in an actual food product simply because it occurred in a test tube. Applicants respectfully disagree with the Examiner's assertion that "[f]ood products are simply chemical compositions, just as are the test compositions utilized and disclosed by the reference." See Office Action of October 6, 2005, page 4. Indeed, food products may in essence be chemical compositions but it is respectfully asserted that the different chemicals that make up a particular food product composition can influence the way in which that food product composition may be processed. Thus, it does not necessarily follow that, simply because a process may be successfully carried out in a laboratory, the same process could be successfully carried out in a food product composition comprising numerous additional components. For this additional reason Applicants respectfully assert that there is no likelihood of success and, therefore, a prima facie case of obviousness has not been established.

Moreover, there is no likelihood that the disclosure of Elder could provide a reduction in the level of asparagine in a food product (and particularly cocoa beans) by, for example, at least about 10%, at least about 30%, etc., up to at least about 90%, as

presently taught and claimed by Applicants. See, for example, Examples 2. Similarly, there is no teaching or suggestion in Elder of roasted cocoa beans that have acrylamide levels below about 350 ppb, down to a level below about 100 ppb, as presently taught and claimed by Applicants. See Specification, page 8. Rather, the Elder examples test only a chemical reaction (or the inhibition thereof) of a few chemicals independent of any food product. Specifically, Example 5 in Elder deals only with the combination of asparagine, glucose and asparaginase in a laboratory setting. (Notably this is the only example having anything to do with *preventing* acrylamide formation.) There is no showing that such an example is in any way representative of what would occur if the method disclosed therein was carried out using an actual food product. Without such a correlation, it cannot be said that Elder teaches the likelihood of success of Applicants independent claims. As a result, it cannot be said that Elder provides *any* likelihood that the findings presented therein could be produced in food products, and in particular, in cocoa and cocoa beans. Therefore, Applicants respectfully assert that because Elder merely sets forth very general teachings around acrylamide reduction, it provides no reasonable expectation of success of providing cocoa beans or cocoa products having reduced acrylamide levels in accordance with Applicants' claims. For this additional reason, Applicants respectfully assert that a prima facie case of obviousness has not been established.

Finally, there is no teaching of all the claim limitations. As discussed above, the Examiner has pointed to no teaching in Elder that suggests the specific claim limitations concerning the level of asparagine or acrylamide reduction, or the resulting level of acrylamide, in cocoa beans that are included in many of Applicants' claims. Again, Applicants respectfully assert that simply disclosing the use of asparaginase does not amount to teaching the present invention, which describes a specific method to reduce acrylamide in cocoa and cocoa products. The fact that Elder mentions cocoa beans among a list of food products that contain acrylamide hardly amounts to teaching a method for reducing the level of asparagine or acrylamide therein. Clearly, Elder cannot be said to render obvious such claims, particularly in view of the very limited disclosure around how one reduces such levels of acrylamide. For this additional reason, Applicants respectfully assert that there is no teaching of all of the present claim limitations.

Findings of fact relied upon in making the obviousness rejection must be supported by substantial evidence within the record. See In re Gartside, 203 F.3d 1305, 1315 (Fed. Cir. 2000). Applicants respectfully assert that, for all of the above reasons, the Examiner has failed to support the obviousness rejection with substantial evidence, and thus, has failed to establish a prima facie case of obviousness under 35 U.S.C. § 103. Therefore, Applicants respectfully request the rejection under 35 U.S.C. §103 be withdrawn.

Conclusion

Applicants once again respectfully request that the prosecution of the present claims be suspended pending the outcome of the Suggestion of Interference between the Zyzak '137 and Elder applications. In the alternative, Applicants respectfully request withdrawal of the rejections of the present claims under 35 U.S.C. §§ 112 and 103.

Respectfully submitted,
THE PROCTER & GAMBLE COMPANY

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Date: January 6, 2006
Customer No. 27752

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Applicants :	David V. Zyzak et al.	
Filed :	June 25, 2003	
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For : METHOD FOR REDUCING ACRYLAMIDE IN FOODS, FOODS HAVING REDUCED LEVELS OF ACRYLAMIDE, AND ARTICLE OF COMMERCE

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August 22, 2005

AMENDMENT PURSUANT TO 37 C.F.R. § 1.116

Sir:

This amendment is submitted pursuant to 37 C.F.R. § 1.116 in response to the Final Rejection dated February 23, 2005, and is submitted to provoke an interference with Elder et al. U.S. Patent Application No. 10/247,504. This amendment is accompanied by a Request for Continuing Examination, Suggestion of Interference with Elder et al. Application No. 10/247,504, Pursuant to 37 C.F.R. § 41.202, and supporting declarations and exhibits.

AMENDMENTS

Please amend the above-identified application as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks begin on page 10 of this paper.